

REMARKS

Claims 1 and 11 are amended. In this Response, Applicants do not add or cancel any claims. Claims 5 and 7 were previously cancelled. Claims 1-4, 6, and 8-14 remain in the Application. Reconsideration of the pending claims is respectfully requested in view of the above amendment and the following remarks.

I. Claims Rejected Under 35 U.S.C. § 103(a)

A. Claims 1, 3, 4, 6 and 8-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Jurgensen I (WO 01/61071) corresponding to (U.S. 2003/0054099) in view of Jurgensen II (WO/02/27064) corresponding to (U.S. 2003/0192471) and/or Gartner (U.S. Patent No. 4,947,790).

To establish a *prima facie* case of obviousness, the relied upon references must teach or suggest every limitation of the claim such that the invention as a whole would have been obvious at the time the invention was made to one skilled in the art. Amended Claim 1 recites the elements of “wherein the transfer gas distributor is a conic block or a conic plate with an apex aligned with a transfer gas inlet and pointing towards the transfer gas inlet and is formed such that the transfer gas cannot be transmitted therethrough in order to distribute widely along an outer inclined plane of the conic block or the conic plate the transfer gas flowing from the transfer gas inlet.” Applicants submit that none of the cited references teach or suggest these limitations.

The Examiner recognizes that Jurgensen I does not disclose the conic block or the conic plate, but relies on Jurgensen II and/or Gartner to cure the deficiency. Jurgensen II discloses that the carrier gas (or transfer gas) flows through a gas-permeable porous partition (16). The porous partition is used to prevent a solid powder source from being blown into the chamber as shown in FIGs. 2-5 of Jurgensen II. Thus, the porous partition functions as a filter. The carrier gas is transmitted through the porous partition to reach the receiving chamber. By contrast, in the claimed invention, the carrier gas (i.e., the claimed transfer gas) is not transmitted through the transfer gas distributor. This is supported by the specification on page 9, lines 31-34. Rather, the transfer gas is distributed along an outer inclined plane of the transfer gas distributor. That is, the transfer gas distributor does not include pores or holes for the transfer gas to flow through. As shown in FIG. 3 of the specification and the related text on page 9, the transfer gas exits the

transfer gas transfer line 417 into the source chamber 300 through holes 418 (i.e., the transfer gas inlet), flows along the outer surface of the transfer gas distributor, and is exhausted at the bottom of the transfer gas distributor via the source vapor outlet. The transfer gas does not flow through the transfer gas distributor. The transfer gas distributor is used to prevent a powder source from being blown into a chamber with a carrier gas and to additionally distribute the carrier gas widely. Thus, unlike Jurgensen II, the claimed transfer gas cannot be transmitted through the transfer gas distributor.

Gartner discloses that the carrier gas (or transfer gas) flows through an inlet chamber (9) that includes a powder saturator (13). Similar to the porous partition of Jurgensen II, the powder saturator of Garner is designed to allow the carrier gas to flow through. Thus, the cited references do not teach or suggest each of the elements of amended Claim 1.

Moreover, Claim 1 comprises the limitations of “a diluted gas supply source, from which diluted gas is supplied to combine with the transfer gas before the transfer gas enters the process chamber in order to control pressure of the process chamber.”

In Jurgenson I, it is impossible to adjust a chamber pressure using the dilution gas. In Jurgenson I, the chamber pressure is fixed by the amount of a carrier gas (35). Thus, it is impossible to adjust a partial pressure of a source material (2) to be deposited at the same chamber pressure. By contrast, in the claimed invention, the dilution gas and carrier gas are supplied to the chamber together (as claimed and shown in FIG. 2 of the specification). Thus, it is possible to adjust the pressure and the partial pressure of the chamber and to deposit thin layers with various characteristics under optimal deposition conditions.

In addition, in Jurgenson I, an evaporator is used only for a liquid organic material (or starting material), as shown in FIG. 8 of Jurgenson I. If a solid powder material is used, the solid powder is blown into the chamber with source vapors and becomes a source of particles in the chamber.

Analogous discussions apply to independent Claim 11, which is similarly amended. Claims 3, 4, 6, 8-10, and 12 respectively depend from Claims 1 and 11 and incorporate the limitations thereof. Thus, for at least the reasons mentioned above in regard to Claim 1, none of the cited references teach or suggest each element of these claims.

Accordingly, reconsideration and withdrawal of the obviousness rejection of Claims 1, 3, 4, 6, and 8-12 are requested.

B. Claim 2 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Jurgensen I in view of Jurgensen II and/or Gartner for the reasons applied to Claim 1, and taken in view of Ohashi (U.S. Patent No. 6,059,885) or Nguyen (U.S. Patent No. 6,444,039).

Claim 2 depends from Claim 1 and incorporates the limitations thereof. Thus, for at least the reasons mentioned above in regard to Claim 1, Jurgensen I in view of Jurgensen II and/or Gartner does not teach or suggest each element of Claim 2.

Ohashi/Nguyen is relied on for disclosing the shower curtain. However, Ohashi/Nguyen does not disclose that a transfer gas distributor is formed such that the transfer gas cannot be transmitted therethrough in order to distribute the transfer gas widely along an outer inclined plane. Thus, the cited references do not, separately or in combination, teach or suggest each of the elements of Claim 2. Accordingly, reconsideration and withdrawal of the rejection of Claim 2 are respectfully requested.

C. Claims 11 and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Jurgensen I in view of Jurgensen II and/or Gartner for the reasons applied to Claim 1, and further in view of Ozias (U.S. Patent No. 4,846,102).

The Examiner relies on Ozias for teaching the purging operation. However, Ozias does not cure the deficiency of the other cited references, namely, the lack of a transfer gas distributor such that the transfer gas cannot be transmitted therethrough. Thus, none of the cited references teach or suggest each of the elements of Claim 11 and its dependent Claim 12.

D. Claims 11-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Jurgensen I in view of Jurgensen II and/or Gartner for the reasons applied to Claim 1, and further in view of Forrest I (U.S. 5,554,220), Forrest II (U.S. 6,337,102), and Posa (U.S. Patent No. 4,747,367).

The Examiner relies on Forrest I and Forrest II for disclosing the deposition of plural layers, and Posa for disclosing flushing a vapor coating reactor. However, none of these

references, separately or in combination, teaches or suggests that a transfer gas distributor is formed such that the transfer gas cannot be transmitted therethrough in order to distribute the transfer gas widely along an outer inclined plane. Accordingly, reconsideration and withdrawal of the rejection of Claim 11 and its dependent Claim 12 are respectfully requested.

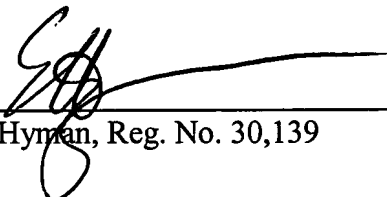
CONCLUSION

In view of the foregoing, it is believed that all claims are now in condition for allowance and such action is earnestly solicited at the earliest possible date. If there are any additional fees due in connection with the filing of this response, please charge those fees to our Deposit Account No. 02-2666.

Respectfully submitted,

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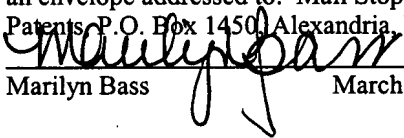
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